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10/822,747	04/13/2004	Robert G. Sanders	4021-0126PUS2	4591
2292 7590 08/22/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER KURTZ, BENJAMIN M	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/822,747  
Filing Date: April 13, 2004  
Appellant(s): SANDERS, ROBERT G.

**MAILED  
AUG 22 2007  
GROUP 1700**

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Paul C. Lewis  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/12/07 appealing from the Office action mailed 3/6/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 19, 21, 22 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Roth et al. US 5 403 453 in view of Jones et al. US 6 953 544.

Regarding claim 1, Roth teaches a method of making a filter media comprising a web of thermoplastic fibers, wherein the thermoplastic fibers are surface modified by treatment with a gaseous plasma at atmospheric pressure, the gaseous plasma consists essentially of air and helium or argon (abstract, col. 2, lines 34-41, col. 4, lines 13-17). Roth does not teach the thermoplastic fibers are electrostatically charged. Jones teaches a method of electrostatically charging thermoplastic fibers (col. 1, lines 17-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method as taught by Roth with the method as taught by Jones because the electrostatically charged fibers improve the filtration properties of the web (col. 1, lines 17-20).

Regarding claim 3, Jones further teaches the electrostatically charged thermoplastic fibers are electrostatically charged by a corona discharge method (col. 5, lines 16-28).

Regarding claims 4, 6, 7 and 9, Roth further teaches the gaseous plasma is a He/air mixture of an Ar/air mixture (claims 4 and 6 of Roth).

Regarding claims 10, 12, Roth further teaches the thermoplastic fibers are made from polyolefin, polyester, or polyamide (col. 10, lines 31-35)

Regarding claims 13, 15, 19, 21, 22 and 24, Jones further teaches the web is a fibrous layer of melt extruded fibers, staple fibers and combinations thereof (col. 4, lines 11-19).

#### **(10) Response to Argument**

##### **(A) Claim 1 is unpatentable over Roth '453 in view of Jones '544 under 35 USC § 103(a).**

Appellant has argued that in the Advisory Action of March 6, 2007, the office argues that Jones teaches two processes that are separate from one another.

The Advisory Action of March 6, 2007, pointed out that the appellant's own specification taught that the process of electrostatically charging the fibers by a corona discharge takes place before or after the gaseous plasma treatment; the processes are separate from one another (paragraphs 24 and 35 of appellant's specification). In the invention two separate processes are taking place at different times to produce the final

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invention. In other words the appellant's invention is a combination of gaseous plasma treatment and corona discharge treatment.

Roth teaches the method of treating thermoplastic fibers with gaseous plasma at atmospheric pressure, the gaseous plasma consists essentially of air and helium or argon (abstract, col. 2, lines 34-41, col. 4, lines 13-17).

Jones teaches a process of electrostatically charging thermoplastic fibers by a corona discharge method (col. 5, lines 16-28).

The two references each teach a different process:

(1) gaseous plasma treatment (Roth)

(2) corona discharge (Jones)

The gaseous plasma treatment of Roth produces the predictable result of desired surface characteristics such as wettability and re-wettability (col. 3, lines 4-9).

The corona discharge treatment of Jones produces the predictable result of transforming a web into an electret, thereby enhancing particle capture in aerosol filters (col. 1, lines 16-25).

Both Roth and Jones teach the use of the same kinds of thermoplastic fiber material for treatment therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the gaseous plasma treatment as taught by Roth followed by the corona discharge method as taught by Jones or vice versa because the resultant product would exhibit the advantages of wettability, as taught by Roth, and have enhanced particle capture, as taught by Jones. "[T]he combination of

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familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR, 127 S. Ct. at 1739.

The appellant also argues that the process of Roth is different from the present invention in that the present invention does not produce any active species. By definition plasma contains active species: ions, electrons, etc. Also, claim 1 only recites gaseous plasma at atmospheric pressure. Roth teaches gaseous plasma at atmospheric pressure.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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8/17/07

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